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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BOTTORFF, CHRISTOPHER

ART UNIT PAPER NUMBER

3618

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/041,832

Applicant(s)

HAUN, ROBERT DALE

Examiner

Christopher Bottorff

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-10 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on February 27, 2002 has been considered by the examiner.

Specification

Applicant is reminded of the proper format for an abstract of the disclosure. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract by the printer is limited.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Porter US 3,815,176.

Porter discloses a hinge assembly that enables a hood of a utility vehicle to open upwardly and backwardly from the front end of the vehicle. See Figure 1. The hinge

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assembly includes a double-rocker, four-link mechanism 24, and has a bracket 20 comprising one link that is mounted to an underside of the hood 12 at a back end of the hood. See column 2, lines 16-20.

Also, a lower fixed link 16 has two opposite ends that are each defined by a bracket mounted to the body of the utility vehicle. An upper coupler link (see the flange portion of bracket 20 that accommodates pins 28 and 46 in Figure 1) is defined by a portion of the hood-mounted bracket and has two opposite ends. Front 26 and back 40 rocker links each have an upper end connected pivotally to one of the opposite ends of the coupler link (see the connection points at pins 28 and 46 in Figure 1), and the back rocker link has a lower end pivotally connected to one of the opposite ends of the fixed link (see the connection point at pin 44 in Figure 1 and see column 2, lines 36-38).

The front, back and coupler links are displaceable so that the upper end of the back link is movable toward and away from the lower end of the front link, between positions on opposite sides of a center line drawn between the lower end of the back link and the other end of the coupler link. See Figure 1. In addition, an extensible-retractable spring 48 is connected between the rocker links so as to bias the upper end of the back link toward the lower end of the front link. See Figure 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porter US 3,815,176 in view of Cheal US 6,230,364.

Porter does not disclose that the front rocker link connects pivotally at the lower end to one of the opposite ends of the fixed link. Rather, the front rocker link of Porter pivotally connects to an intermediary link 30, which connects pivotally to one of the opposite ends of the fixed link. Also, Porter does not disclose that the front link is comparatively longer than the back link, or that the coupler link is the shortest link.

However, Cheal teaches that the practice of forming both rocker links 6 and 8 of a hinge assembly as unified, rigid structures, without the presence of an intermediary link, was old and well known in the art at the time the invention was made. See Figure 1. Cheal further teaches the practice of forming the coupler link 22 as the shortest link. See Figure 1. From the teachings of Cheal, forming the front rocker link and intermediary link of Porter as one unified, rigid structure, such that the unified front link connects pivotally at the lower end to one of the opposite ends of the fixed link, would have been obvious to one of ordinary skill in the art at the time the invention was made. This would provide a stronger support structure for the hood. Also, this would result in a structure in which the front link is comparatively longer than the back link. From the further teachings of Cheal, forming the coupler link as the shortest link would have been obvious to one of ordinary skill in the art at the time the invention was made in order to reduce the amount of material required to form the hinge assembly and to ensure efficient motion of the hinge assembly.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Porter US 3,815,176 in view of Schroeder et al. US 6,227,606.

Porter does not disclose that the bracket is secured adhesively to the underside of the hood. Schroeder et al. teaches the practice of securing hinge brackets 28 adhesively to the underside of a hood 10. See Figures 1 and 3; and column 2, lines 60-62. From the teachings of Schroeder et al., securing the bracket of Porter adhesively to the underside of the hood would have been obvious to one of ordinary skill in the art at the time the invention was made. This would reduce the weight of the assembly.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Porter US 3,815,176 in view of Schroeder et al. US 6,227,606 as applied to claim 7 above, and further in view of Boyer US 6,141,829 and Hosaka et al. US 5,347,799.

Porter does not disclose that the bracket is made of steel and the hood is made of polymeric material. However, Boyer teaches the common practice of forming hinge brackets of steel (see column 5, lines 7-10), and Hosaka et al. teaches the common practice of forming hoods of polymeric material, such as polypropylene (see column 6, lines 6-8). From the teachings of Boyer, forming the bracket of Porter of steel would have been obvious to one of ordinary skill in the art at the time the invention was made in order to enhance the strength of the bracket. From the teachings of Hosaka et al., forming the hood of Porter of polymeric material, such as polypropylene, would have

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been obvious to one of ordinary skill in the art at the time the invention was made in order to reduce the weight of the hood.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schroeder et al. US 6,227,606 in view of Boyer US 6,141,829, Hosaka et al. US 5,347,799, and Fleming US 5,067,759.

Schroeder et al. teaches a utility vehicle having a hinge bracket 28 adhesively secured to a hood 10. See Figures 1 and 3; and column 2, lines 60-62. Schroeder et al. does not disclose that the bracket is made of steel or that the hood is made of polypropylene by a vacuum forming process. Boyer teaches the common practice of forming hinge brackets of steel (see column 5, lines 7-10), and Hosaka et al. teaches the common practice of forming hoods of polypropylene (see column 6, lines 6-8). From the teachings of Boyer, forming the bracket of Schroeder et al. of steel would have been obvious to one of ordinary skill in the art at the time the invention was made in order to enhance the strength of the bracket. From the teachings of Hosaka et al., forming the hood of Schroeder et al. of polypropylene would have been obvious to one of ordinary skill in the art at the time the invention was made in order to reduce the weight of the hood. In addition, Fleming teaches that forming polypropylene vehicle parts through a vacuum forming process was old and well known in the art at the time the invention was made. See column 2, lines 43-45. From the teaching of Fleming, using a vacuum forming process to form the polypropylene hood would have been

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obvious to one of ordinary skill in the art at the time the invention was made in order to utilize a process familiar to manufacturing personnel.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schroeder et al. US 6,227,606 in view of Boyer US 6,141,829, Hosaka et al. US 5,347,799, and Fleming US 5,067,759 as applied to claim 9 above, and further in view of Porter US 3,815,176.

Schroeder et al. does not disclose that the combination includes a double-rocker, four-link hinge mechanism, in which the bracket forms one link. However, Porter teaches that providing a utility vehicle with a double-rocker, four-link hinge mechanism, in which a hinge bracket forms one link, was old and well known in the art at the time the invention was made. See Figure 1. From the teachings of Porter, providing the vehicle of Schroeder et al. with a double-rocker, four-link hinge mechanism, in which a hinge bracket forms one link, would have been obvious to one of ordinary skill in the art at the time the invention was made. This would help efficiently move the hood between the open and closed positions.

Allowable Subject Matter

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not disclose or teach a spring that is mounted such that the front end is comparatively closer to the lower end of a front link

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and the back end of the spring is comparatively farther from the lower end of a back link, in combination with a hinge having the features defined in the claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bell, Lustig, Kern, Millsap, Kurtz, Jr. et al., Schoen et al., Tsumiyama et al., Cheal et al. US 6,367,123, Cheal et al. US 6,397,434, Smith et al., and Benthous et al., US 6,520,557 disclose hinge assemblies. Greve et al. and Schroeder et al. US 5,964,490 disclose joining components with adhesive, and Schroeder et al. particularly teaches the common practice of joining plastic and steel vehicle components with adhesive.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Bottorff whose telephone number is (703) 308-2183. The examiner can normally be reached on Mon.-Fri. 7:30 a.m. - 4:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Johnson can be reached on (703) 308-0885. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

A handwritten signature in cursive script, appearing to read "Chris Bottorff".

Christopher Bottorff
April 30, 2003